

Remarks

In view of the above amendments and the following remarks, reconsideration of the rejections and further examination are requested.

Claims 5 and 6 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Osada (US 6,477,127) in view of Komuro (US 6,223,285). Claims 1, 2, 4, 7, 8, 10 and 11 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Osada in view of Komuro and further in view of Behaloh (US 6,886,098). Claims 3, 9 and 12 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Osada in view of Komuro and Behaloh and further in view of Quinnett (US 6,615,160).

Claims 1, 2, 4-8, 10 and 11 have been amended so as to further distinguish the present invention from the references relied upon in the rejections. Further, new claim 13 has been added. It is submitted that the above-mentioned rejections are no longer applicable to the claims for the following reasons.

Claim 1 is patentable over the combination of Osada, Komuro and Behaloh, since claim 1 recites a recording apparatus including, in part:

an accepting unit operable to accept from a user an indication whether the optical disk is for consumer use or industrial use;

an encrypting unit operable to encrypt digital content, using a second content key that is to be encrypted using a unique key which is unique to an industrial reproduction apparatus when the optical disk is for industrial use, and using a first content key that is to be encrypted using a non-unique key which is not unique to a consumer reproduction apparatus when the optical disk is for consumer use;

a first writing unit operable to, when the optical disk is for consumer use, (a) generate, on the optical disk, a first area that is to be accessed when the consumer reproduction apparatus attempts to reproduce the digital content, and (b) write the encrypted digital content to the first area; and

a second writing unit operable to, when the optical disk is for industrial use, (a) generate, on the optical disk, the first area and a second area that is to be accessed when the industrial reproduction apparatus attempts to reproduce the digital content, (b) write the encrypted digital content to the second area, and (c) write message data reproducible by the consumer reproduction apparatus to the first area.

The present invention as recited in claim 1 is characterized in that the digital content written on the optical disk is encoded differently depending on whether the optical disk is for consumer use or industrial use. In other words, the encrypting unit uses a different content key depending on whether the optical disk is for consumer use or industrial use. Further, the content key itself is also encrypted in a different manner depending on whether the optical disk is for consumer use or industrial use.

If the optical disk is for industrial use, a unique key which is unique to an industrial reproduction apparatus is used for encrypting the content key. If the optical disk is for consumer use, a non-unique key which is not unique to a consumer reproduction apparatus is used for encrypting the content key. Therefore, if the optical disk is for industrial use, the decryption of the encrypted content key can only be performed by the specific reproduction apparatus that is permitted to reproduce the digital content, and cannot be performed by other reproduction apparatuses. Further, if the optical disk is for consumer use, the decryption of the encrypted content key can be performed by any consumer reproduction apparatus that is permitted to reproduce the digital content. One of the benefits of the variation in encryption is that it enhances the confidentiality of the digital content.

Another feature of the present invention as recited in claim 1 is that it changes the location on the optical disk where the content is stored depending on whether the optical disk is for consumer use or industrial use. In other words, if the optical disk is for consumer use, a first area which is to be accessed when a consumer reproduction apparatus attempts to reproduce the digital content is generated on the optical disk, and the encrypted digital content is written to the first area. If the optical disk is for industrial use, the first area and a second area which is to be accessed when an industrial reproduction apparatus attempts to reproduce the digital content are generated on the optical disk, the encrypted digital content is written to the second area, and message data reproducible by the consumer reproduction apparatus is written to the first area. This message data indicates that the digital content cannot be reproduced by the consumer reproduction apparatus. As a result of writing the message data to the first area which is to be accessed when the consumer reproduction apparatus attempts to reproduce the digital content, the message data is displayed by the consumer reproduction apparatus if the optical disk for industrial use is loaded to the consumer reproduction apparatus. Therefore, the user of the

consumer reproduction apparatus will be notified that the optical disk is for industrial use and the confidentiality of the digital content will be maintained.

It is submitted that the combination of combination of Osada, Komuro and Behaloh fails to disclose or suggest the accepting unit, the encrypting unit, the first writing unit and the second writing unit recited in claim 1, which implement the features of the present invention discussed above.

Regarding Osada, it discloses an apparatus for recording information (user data A) to an optical disk 1 and, at a later time, additionally recording new information (user data B) to an area of the optical disk 1 that is subsequent to an area where the information (user data A) is recorded. In order to perform the additional recording, the apparatus locates a recording termination point E at the end of the information (user data A), places a linking start point in an appropriate CPM area on the optical disk 1, and then records the new information (user data B). As a result, the start of the new data (user data B) can be determined by detecting the linking start point. (See column 6, lines 15-44 and Figures 5 and 6).

Based on the above discussion, it is apparent that Osada discloses an apparatus whereby different information can be stored on the same optical disk 1 at different times. However, Osada fails to disclose or suggest that the apparatus (1) accepts from a user an indication whether the optical disk 1 is for consumer use or industrial use; (2) encrypts digital content, using a second content key that is to be encrypted using a unique key which is unique to an industrial reproduction apparatus when the optical disk 1 is for industrial use, and using a first content key that is to be encrypted using a non-unique key which is not unique to a consumer reproduction apparatus when the optical disk 1 is for consumer use; (3) when the optical disk 1 is for consumer use, (a) generates, on the optical disk 1, a first area that is to be accessed when the consumer reproduction apparatus attempts to reproduce the digital content, and (b) writes the encrypted digital content to the first area; or (4) when the optical disk 1 is for industrial use, (a) generates, on the optical disk 1, the first area and a second area that is to be accessed when the industrial reproduction apparatus attempts to reproduce the digital content, (b) writes the encrypted digital content to the second area, and (c) writes message data reproducible by the consumer reproduction apparatus to the first area. It is apparent that Osada fails to disclose or suggest all of these features of claim 1. As a result, Komuro and/or Behaloh must disclose or

suggest these features in order for the combination of Osada, Komuro and Behaloh to render claim 1 obvious.

Komuro discloses a system 100 that is capable of transmitting information as three different types of AV information packets which have different levels of copy protection (i.e., three different EMI modes). The EMI modes of each of the AV information packets are copy prohibition, copy only once, and free copying. The system of Komuro uses a different encryption process for data transmission depending on the different EMI modes. (See column 5, line 37 – column 6, line 45).

Based on the above discussion, it is apparent that Komuro does vary the encryption of the AV information packets to be transmitted. However, it is clear that Komuro varies the encryption based on the EMI mode (copy prohibition, copy only once or free copying) associated with the AV information packets and not on whether the AV information packets are to be stored on an optical disk for consumer use or industrial use as is recited in claim 1. Further, it is apparent that Komuro also fails to disclose or suggest that the system 100 (1) accepts from a user an indication whether an optical disk is for consumer use or industrial use; (2) when the optical disk is for consumer use, (a) generates, on the optical disk, a first area that is to be accessed when a consumer reproduction apparatus attempts to reproduce the digital content, and (b) writes the encrypted digital content to the first area; or (3) when the optical disk is for industrial use, (a) generates, on the optical disk, the first area and a second area that is to be accessed when an industrial reproduction apparatus attempts to reproduce the digital content, (b) writes the encrypted digital content to the second area, and (c) writes message data reproducible by the consumer reproduction apparatus to the first area. Therefore, Komuro also fails to disclose or suggest these features of claim 1. As a result, Behaloh must disclose or suggest these features in order for the combination of Osada, Komuro and Behaloh to render claim 1 obvious.

Benaloh discloses a system including a number of different content players and a content provider. The content provider distributes encryption keys to the content players, and discloses a technique of assigning the encryption keys to each of the content players and controlling each content player to selectively use the encryption keys. (See column 6, line 42 – column 7, line 31).

In light of the above discussion, it is apparent that the system of Benaloh does disclose the use of encryption keys that are unique to specific content players. Therefore, this disclosure

can be regarded as an encryption method for industrial use. However, it is also apparent that the main feature of the invention of Benaloh concerns key assignment and management, whereby a set of encryption keys is assigned to each content player. Benaloh fails to disclose or suggest that encryption is varied based on whether the content is to be stored on an optical disk for consumer use or industrial use as is recited in claim 1. Further, it is apparent that Benaloh fails to disclose or suggest that the system (1) accepts from a user an indication whether an optical disk is for consumer use or industrial use; (2) when the optical disk is for consumer use, (a) generates, on the optical disk, a first area that is to be accessed when a consumer reproduction apparatus attempts to reproduce the digital content, and (b) writes the encrypted digital content to the first area; or (3) when the optical disk is for industrial use, (a) generates, on the optical disk, the first area and a second area that is to be accessed when an industrial reproduction apparatus attempts to reproduce the digital content, (b) writes the encrypted digital content to the second area, and (c) writes message data reproducible by the consumer reproduction apparatus to the first area.

In consideration of the above discussion, Osada, Komuro and Behaloh do not, either alone or in combination, disclose or suggest the accepting unit, the encrypting unit, the first writing unit and the second writing unit, all of which are recited in claim 1. Therefore, one of ordinary skill in the art would not have been motivated to modify or combine the references so as to obtain the invention as recited in claim 1.

It is noted that Quinnett is relied upon in the Office Action as disclosing displaying a message on a screen in different languages. However, Quinnett also discloses an apparatus for testing for and diagnosing faults in an engine including an electronic control unit. Therefore, it is apparent that Quinnett also fails to disclose or suggest the above-discussed features of claim 1.

As for claims 4, 7 and 10, they are patentable over the references relied upon in the rejections for reasons similar to those set forth above in support of claim 1. That is, claims 4, 7 and 10 recite features similar to those in claim 1, which are not disclosed or suggested by the references.

Claim 5 is patentable over the combination of Osada and Komuro, since claim 5 recites an optical disk that has a first area and a second area and on which digital content is recorded, wherein the first area is an area to be accessed when a consumer reproduction apparatus attempts to reproduce the digital content, and on which message data reproducible by the consumer

reproduction apparatus is recorded, the second area is an area which is to be accessed when an industrial reproduction apparatus attempts to reproduce the digital content, and on which the digital content encrypted using a content key that is to be encrypted using a unique key unique to the industrial reproduction apparatus is recorded, and wherein the message data indicates that the digital content cannot be reproduced by a consumer reproduction apparatus. The combination of Osada and Komuro fails to disclose or suggest these features of claim 5.

As discussed above, Osada discloses the apparatus for recording the information (user data A) to the optical disk 1 and, at a later time, additionally recording the new information (user data B) to another area of the optical disk 1 that is after the area to which the information (user data A) is recorded. In other words, it is apparent that the areas of the optical disk 1 of Osada are accessed dependent on which information (user data A or user data B) is to be reproduced. On the other hand, claim 5 recites that the first area and the second area are accessed based on the type of reproduction apparatus is attempting to perform the reproduction. Therefore, Osada fails to disclose or suggest these features of claim 5. As a result, Komuro must disclose or suggest the features in order for the combination of Osada and Komura to render claim 5 obvious.

As for Komura, it discloses the system 100 that is capable of encrypting information based on the level of copy protection associated with the information. However, Komura also fails to disclose or suggest the first and second areas of the optical disk recited in claim 5. As a result, the combination of Osada and Komura fails to render claim 5 obvious.

It is also noted that Benaloh and Quinnett fail to disclose or suggest the above-discussed features of claim 5.

As for claim 6, it is patentable over the references relied upon in the rejections for reasons similar to those set forth above in support of claim 5. That is, claim 6 recites features similar to those in claim 5, which are not disclosed or suggested in the references.

Because of the above-mentioned distinctions, it is believed clear that claims 1-13 are patentable over the references relied upon in the rejections. Furthermore, it is submitted that the distinctions are such that a person having ordinary skill in the art at the time of invention would not have been motivated to make any combination of the references of record in such a manner as to result in, or otherwise render obvious, the present invention as recited in claims 1-13. Therefore, it is submitted that claims 1-13 are clearly allowable over the prior art of record.

In view of the above amendments and remarks, it is submitted that the present application is now in condition for allowance. The Examiner is invited to contact the undersigned by telephone if it is felt that there are issues remaining which must be resolved before allowance of the application.

Respectfully submitted,

Hirotsugu KAWADA et al.

By:



David M. Ovedovitz
Registration No. 45,336
Attorney for Applicants

DMO/jmj
Washington, D.C. 20006-1021
Telephone (202) 721-8200
Facsimile (202) 721-8250
November 2, 2005